lines on the management of stable angina pectoris, endorsing the use of this dose of perindopril, which is of proven efficacy in this indication (Class 1, level of evidence A)

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Assessment of heart rate turbulence in hypertensive patients

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Introduction: Heart rate turbulence (HRT) has been currently believed to represent a non invasive method of measurement of the baroreflex-sensitivity. Studies suggested that it may reflect vagal robustness in antagonizing the effects of sympathic activity.

Most studies exploring HRT have been dealt in ischemic and heart failure patients. To date, only few studies investigated these parameters in patients with hypertension.

Aim: the aim of this study is to compare HRT parameters, derived from Holter recordings, in hypertensive patients and healthy controls.

Methods: In this prospective studies, 85 patients with essential hypertension (45 females and 40 males, age 60 ± 12 years old) and 40 healthy controls matched to age and gender underwent Holter recordings with analysis of HRT parameters: turbulence onset (TO) and turbulence slope (TS). Heart rate variability parameters reflecting sympathic (SDNN, SDANN, LF) and parasympathic activity (RMSSD, HF) were also studied. Patients with diabetes, ischemic heart disease and atrial fibrillation were excluded.

Results: there was no significant difference regarding HRT parameters as well as RMSSD and HF between hypertensive patients and healthy controls. SDNN, SDANN and LF were significantly lower in hypertensive patients (table 1). This difference persisted after multivariate analysis.

Table. Comparison between HRT and HRV parameters in hypertensive patients and healthy controls

	Hypertensive patients (n=85)	Healthy controls (n=40)	p
TO	-0.0196	-0.0120	NS
TS	8,66	9,68	NS
SDNN	117 ± 33	141 ± 45	0.001
SDANN	101 ± 29	125 ± 42	<0.0001
RMSSD	37 ± 22	44 ± 20	NS
LF	564 ± 53	830 ± 60	0.02
HF	301 ± 34	436 ± 40	NS

Conclusion: HRT parameters are similar in essential hypertensive patients and healthy controls. Other Holter derived parameters exploring the parasympathic tone were also comparable suggesting that the vagal tone is preserved in essential hypertension. This latter is associated with a significant higher sympathetic activity. Further studies are needed to determine the pathophysiologic significance and the prognostic value of this loss of modulation of the autonomic nervous system and whether it could have therapeutic implications.

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Vascular BDNF expression and oxidative stress during aging and the development of chronic hypertension

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A Neurotrophin (NT): Brain-derived Neurotrophic Factor (BDNF) and the tropomyosin-related kinase (TrK) family of receptors play an important role in regulating vascular development and response to injury. But little is known about their role in vascular homeostasis in normal and pathological conditions. In the present study, we investigated the potential participation of the BDNF/TrK pathway and oxidative stress during the development of hypertension in an Spontaneously Hypertensive Rat (SHR) model. Systolic blood pressure (SBP) was measured (tail-cuff method) in male SHR and normotensive Wistar Kyoto rats (WKY) at 6 and 13 weeks of age. Plasma antioxidant capacity was measured by Electron Spin Resonance. Production of superoxide anion was assessed in aorta slices using a fluorescent oxidative probe: dihydroethidium.(DHE) Aorta NAD(P)H oxidase activity was determined by chemiluminescence. Plasma level of BDNF was assessed by an ELISA method and expression of BDNF, TrKB, p47phox, Angiotensin II AT1 receptor and MCP-1 was determined by immunochemistry. At 13 weeks, SHR became hypertensive ($p<0.05$). In 6-week-old SHR aorta, DHE staining was twice than in WKY aorta and the same pattern was observed at 13 weeks. At 13 weeks, NAD(P)H oxidase activity enhancement was associated with an increase in p47phox and AT1 expression and BDNF in aortic wall ($p<0.05$). Vascular MCP-1 expression increased with increasing blood pressure ($p<0.05$). In SHR rats, an increase in levels of oxidative stress occurs before elevation of blood pressure, but is not linked with an increase in NAD(P)H oxidase activity at 6 weeks. However, this oxidative stress seems to be associated with an increase in vascular BDNF during animals aging, and appears prematurely in SHR vessels. The relationship between BDNF/TrKB, oxidative stress and inflammation occurring in hypertension onset, remains to be elucidated.

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Long term outcome after acute aortic syndrom of the descending aorta, our single center experience

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Background: Aortic dissection is a well rare disease with pour mid and long term prognosis. The treatment of initial phase of acute aortic syndrom (AAS) affecting the descending aorta is essentially based on lowering blood pressure and on relieving pain. The emergence of endovascular therapy offers new perspectives in the management of this old disease. Few data exist on the long term prognosis of patients who discharge alive after a medical treatment of a type B AAS. The aim of our study was to determine factors of the acute phase associated with adverse long term survival.

Methods and Results: We study the long term outcome of 77 patients, hospitalized in our center from 1996 to 2008, who discharge alive after type B AAS. All patients received a medical treatment and an endovascular therapy if needed. The mean follow-up period was 50.8 month, with a survival rate of 78 %.

Kaplan-Meier survival curves were constructed, and Cox proportional hazards analysis was performed to identify independent predictors of follow-up mortality from any cause.

Factors that influence the mortality ($p<0.05$) was a low systolic blood pressure at admission, a thrombopenia in the acute period, a prior history of COPD, the diameter of the ascending aorta and the take of a inhibitor of the renin-angiotensin system. Independent predictors of follow-up mortality from all cause were the history of COPD ($p=0.0022$, HR 17.5) a thrombopenia in the acute phase ($p=0.042$, HR 3.5), and systolic blood pressure at admission under 120 mmHg ($p=0.0048$, HR 7.928).

Conclusion: Patients who discharge alive after medically treated type B acute aortic disease keep a worse mid and long term prognosis. Our study identifies new risk factors of mortality after discharge, and a population at very high risk. The treatment of the acute phase needs further study to better understand and optimize care of this patients.